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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/460,638	12/14/1999	KENNETH G. FLUGAUR	0325.00324	2751
21363 7590 02/07/2007 CHRISTOPHER P. MAIORANA, P.C. 24840 HARPER SUITE 100 ST. CLAIR SHORES, MI 48080			EXAMINER ZERVIGON, RUDY	
			ART UNIT	PAPER NUMBER
			1763	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/07/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/460,638

Applicant(s)

FLUGAUR ET AL.

Examiner

Rudy Zervigon

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119


- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>See Continuation Sheet</u> . |

Continuation of Attachment(s) 6). Other: Pre-Brief Appeal Conference Decision.

Application Number 	Application/Control No. 09/460,638	Applicant(s)/Patent under Reexamination FLUGAUR ET AL.	
	Rudy Zervigon	Art Unit 1763	
Document Code - AP.PRE.DEC			

Notice of Panel Decision from Pre-Appeal Brief Review



This is in response to the Pre-Appeal Brief Request for Review filed 11/13/2006.

1. ☐ **Improper Request** – The Request is improper and a conference will not be held for the following reason(s):

- ☐ The Notice of Appeal has not been filed concurrent with the Pre-Appeal Brief Request.
- ☐ The request does not include reasons why a review is appropriate.
- ☐ A proposed amendment is included with the Pre-Appeal Brief request.
- ☐ Other:

The time period for filing a response continues to run from the receipt date of the Notice of Appeal or from the mail date of the last Office communication, if no Notice of Appeal has been received.

2. ☐ **Proceed to Board of Patent Appeals and Interferences** – A Pre-Appeal Brief conference has been held. The application remains under appeal because there is at least one actual issue for appeal. Applicant is required to submit an appeal brief in accordance with 37 CFR 41.37. The time period for filing an appeal brief will be reset to be one month from mailing this decision, or the balance of the two-month time period running from the receipt of the notice of appeal, whichever is greater. Further, the time period for filing of the appeal brief is extendible under 37 CFR 1.136 based upon the mail date of this decision or the receipt date of the notice of appeal, as applicable.

☐ The panel has determined the status of the claim(s) is as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: _____.

Claim(s) withdrawn from consideration: _____.

3. ☐ **Allowable application** – A conference has been held. The rejection is withdrawn and a Notice of Allowance will be mailed. Prosecution on the merits remains closed. No further action is required by applicant at this time.

4. ☒ **Reopen Prosecution** – A conference has been held. The rejection is withdrawn and a new Office action will be mailed. No further action is required by applicant at this time.

All participants:

(1) Jennifer K. Michener

(2) Rudy Zervigon

(3) Parviz Hassanzadeh

(4) _____

DETAILED ACTION

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. The results of the Pre-Appeal Conference of 12/1/2006 are made of record and provided herewith. Reopened prosecution based on newly cited art to Usami; Tatsuya (US 6099747 A) is provided below.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Usami; Tatsuya (US 6099747 A) in view of Ishikawa et al (USPat. 6,143,078) and Bernard J. Curtis (USPat. 4,328,068). Usami teaches a channel sleeve (46; Figure 1; column 4; lines 8-20) for a plasma processing chamber (Figure 1; column 4; lines 8-20) comprising: a one-piece outer portion (46; Figure 1; column 4; lines 8-20) configured for insertion into an aperture¹ (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) through a wall (chamber wall, not labelled; Figure 1; column 4; lines 8-20) of a plasma processing chamber (Figure 1; column 4; lines 8-20), said one-piece outer portion (46; Figure 1; column 4; lines 8-20) consisting an electrically insulative material ("SiC"; Figure 1; column 4; lines 8-20) and having dimensions effective to prevent or inhibit plasma arcing to an electrically conductive surface (substrate electrode 43 is "grounded"; Figure 1; column 4; lines 8-20) of said wall (chamber wall, not labelled; Figure 1; column 4; lines 8-20) of said plasma processing chamber (Figure 1; column 4;

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lines 8-20) exposed by said aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) through said wall (chamber wall, not labelled; Figure 1; column 4; lines 8-20) of said plasma processing chamber (Figure 1; column 4; lines 8-20) – claim 1

Usami further teaches:

- i. a lower section (chamber/46 interface; Figure 1) having a shape and dimension approximately the same as a corresponding shape and dimension² of said aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) wherein said lower section is configured to fit securely into said aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20); and (iii) an inner opening (accommodating electrode 42; Figure 1; column 4; lines 8-20) communicating through the electrically insulative material (“SiC”; Figure 1; column 4; lines 8-20) between a bottom and a top of the outer portion – claim 1, 5, 6, 8
- ii. a flange section (top of 46 before the 46/chamber interface; Figure 1) having a dimension greater than a corresponding dimension of said aperture³ (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20), such that said flange section (top of 46 before the 46/chamber interface; Figure 1) contacts a portion of an outside surface of said wall surrounding said aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) when said (one-piece) sleeve is inserted in said aperture – claim 5, 6, 8

¹ The Examiner agrees with Applicant’s dictionary definition of “aperture” (Page 14, 1st paragraph of 2/13/6 reply), in this action and throughout the prosecution history.

² Proportions of features in a drawing are not evidence of actual proportions when drawings are not to scale. Because the reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawing features are of little value. However, the description of the article pictured can be relied on, in combination with the drawings, for what they would reasonably teach one of ordinary skill in the art. (In re Wright, 193 USPQ 332 (CCPA 1977). MPEP 2125.

³ The Examiner agrees with Applicant’s dictionary definition of “aperture” (Page 14, 1st paragraph of 2/13/6 reply), in this action and throughout the prosecution history.

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- iii. said one-piece outer portion (46; Figure 1; column 4; lines 8-20) further comprising a flange section (top of 46 before the 46/chamber interface; Figure 1) having a dimension² greater than a corresponding dimension of said aperture⁴ (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20), such that said flange section (top of 46 before the 46/chamber interface; Figure 1) contacts a portion of an outside surface of said wall surrounding said aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) when said channel sleeve (46; Figure 1; column 4; lines 8-20) is inserted in said aperture⁵ (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) through said wall (chamber wall, not labelled; Figure 1; column 4; lines 8-20) of said plasma processing chamber (Figure 1; column 4; lines 8-20) – claim 1
- iv. A plasma processing chamber (Figure 1; column 4; lines 8-20) having: at least one aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) therein, the at least one aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) having an exposed electrically conductive surface (substrate electrode 43 is “grounded”; Figure 1; column 4; lines 8-20) , and the channel sleeve (46; Figure 1; column 4; lines 8-20) for a plasma processing chamber (Figure 1; column 4; lines 8-20) of Claim 1, inserted into the at least one aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20), as claimed by claim 2
- v. A method of making a plasma processing chamber (Figure 1; column 4; lines 8-20), the chamber (Figure 1; column 4; lines 8-20) having at least one aperture (hole in chamber

⁴ The Examiner agrees with Applicant’s dictionary definition of “aperture” (Page 14, 1st paragraph of 2/13/6 reply), in this action and throughout the prosecution history.

⁵ The Examiner agrees with Applicant’s dictionary definition of “aperture” (Page 14, 1st paragraph of 2/13/6 reply), in this action and throughout the prosecution history.

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wall, not labelled; Figure 1; column 4; lines 8-20) therein, the at least one aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) having an exposed electrically conductive surface (substrate electrode 43 is “grounded”; Figure 1; column 4; lines 8-20) , the method comprising inserting the channel sleeve (46; Figure 1; column 4; lines 8-20) for a plasma processing chamber (Figure 1; column 4; lines 8-20) of Claim 1 into the at least one aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20), as claimed by claim 3

- vi. A plasma processing chamber (Figure 1; column 4; lines 8-20) having: a wall (chamber wall, not labelled; Figure 1; column 4; lines 8-20); at least one aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) through said wall (chamber wall, not labelled; Figure 1; column 4; lines 8-20), the at least one aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) having wall (chamber wall, not labelled; Figure 1; column 4; lines 8-20), and an exposed electrically conductive surface (substrate electrode 43 is “grounded”; Figure 1; column 4; lines 8-20) of said wall (chamber wall, not labelled; Figure 1; column 4; lines 8-20), and a one-piece sleeve (46; Figure 1; column 4; lines 8-20) configured for insertion into the aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20), the one-piece sleeve (46; Figure 1; column 4; lines 8-20) consisting of an electrically insulative material (“SiC”; Figure 1; column 4; lines 8-20) and having: dimensions effective to prevent inhibit plasma arcing to the exposed electrically conductive surface (substrate electrode 43 is “grounded”; Figure 1; column 4; lines 8-20) of the wall (chamber wall, not labelled; Figure 1; column 4; lines 8-20) – claim 5

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- vii. a lower section (chamber/46 interface; Figure 1) having a shape approximate said aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) to fit into said aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20); and an inner opening (accomodating electrode 42; Figure 1; column 4; lines 8-20) communicating through the electrically insulative material ("SiC"; Figure 1; column 4; lines 8-20) from a bottom to a top of the one-piece sleeve (46; Figure 1; column 4; lines 8-20) – claim 5
- viii. A method of making a plasma processing chamber (Figure 1; column 4; lines 8-20) having a wall (chamber wall, not labelled; Figure 1; column 4; lines 8-20), the method comprising: forming at least one aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) through said wall (chamber wall, not labelled; Figure 1; column 4; lines 8-20), the at least one aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) having an exposed electrically conductive surface (substrate electrode 43 is "grounded"; Figure 1; column 4; lines 8-20) of said wall (chamber wall, not labelled; Figure 1; column 4; lines 8-20); and (B) inserting a one-piece sleeve (46; Figure 1; column 4; lines 8-20) into the aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20), the one-piece sleeve (46; Figure 1; column 4; lines 8-20) consisting of an electrically insulative material ("SiC"; Figure 1; column 4; lines 8-20) and having: dimensions effective to prevent or inhibit the exposed electrically conductive surface (substrate electrode 43 is "grounded"; Figure 1; column 4; lines 8-20) of the plasma arcing to wall (chamber wall, not labelled; Figure 1; column 4; lines 8-20) – claim

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- ix. a lower section (chamber/46 interface; Figure 1) having a shape approximate said aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) to fit into said aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20); and (iv) an inner opening (accommodating electrode 42; Figure 1; column 4; lines 8-20) communicating through the electrically insulative material ("SiC"; Figure 1; column 4; lines 8-20) between a bottom and a top of the one-piece sleeve (46; Figure 1; column 4; lines 8-20) – claim 6
- x. The method of Claim 6, further comprising, prior to inserting said one-piece sleeve (46; Figure 1; column 4; lines 8-20), the step of forming said bottom ("L" portion) of said one-piece sleeve (46; Figure 1; column 4; lines 8-20) to a plane having a non-orthogonal angle ("L" portion of 46) relative to said inner opening (accommodating electrode 42; Figure 1; column 4; lines 8-20), as claimed by claim 7
- xi. A method of processing a workpiece (228; Figure 2B; 48; Figure 2), comprising: (A) exposing the chamber (Figure 1; column 4; lines 8-20) having (1) a wall (chamber wall, not labelled; Figure 1; column 4; lines 8-20), (2) aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) having an exposed electrically conductive surface (substrate electrode 43 is "grounded"; Figure 1; column 4; lines 8-20) of said wall (chamber wall, not labelled; Figure 1; column 4; lines 8-20), and a one-piece sleeve (46; Figure 1; column 4; lines 8-20) inserted into the aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20), the one-piece sleeve (46; Figure 1; column 4; lines 8-20) consisting of an electrically insulative material ("SiC"; Figure 1; column 4; lines 8-20) and having: dimensions effective to prevent or inhibit plasma arcing to the

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exposed electrically conductive surface (substrate electrode 43 is “grounded”; Figure 1; column 4; lines 8-20) of the wall (chamber wall, not labelled; Figure 1; column 4; lines 8-20), (iii) a lower section (chamber/46 interface; Figure 1) having a shape approximate a width (diameter) of said aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) to into said aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20); and an inner opening (accommodating electrode 42; Figure 1; column 4; lines 8-20) communicating through the electrically insulative material (“SiC”; Figure 1; column 4; lines 8-20) between a bottom and a top of the one-piece sleeve (46; Figure 1; column 4; lines 8-20) – claim 8

- xii. A method of operating a plasma processing chamber (Figure 1; column 4; lines 8-20), wherein the chamber (Figure 1; column 4; lines 8-20) has at least one aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) therein and the aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) has an exposed electrically conductive surface (substrate electrode 43 is “grounded”; Figure 1; column 4; lines 8-20), the method comprising the steps of: (A) initiating a plasma in the chamber (Figure 1; column 4; lines 8-20), the aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20) having the channel sleeve (46; Figure 1; column 4; lines 8-20) for a plasma processing chamber (Figure 1; column 4; lines 8-20) of Claim 1 therein, then (B) cleaning (“etching”; through out) the chamber (Figure 1; column 4; lines 8-20) and the channel sleeve (46; Figure 1; column 4; lines 8-20) for a plasma processing chamber (Figure 1; column 4; lines 8-20), as claimed by claim 9

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- xiii. The method of Claim wherein said plasma exists in said chamber (Figure 1; column 4; lines 8-20) for a predetermined period of time , as claimed by claim 10
- xiv. The channel sleeve (46; Figure 1; column 4; lines 8-20) for a plasma processing chamber (Figure 1; column 4; lines 8-20) according to claim 1, wherein said flange section (top of 46 before the 46/chamber interface; Figure 1) has a width (diameter) that is greater than a corresponding width (diameter) of said aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20), as claimed by claim 12
- xv. The channel sleeve (46; Figure 1; column 4; lines 8-20) for a plasma processing chamber (Figure 1; column 4; lines 8-20) according to claim 12, wherein said lower section (chamber/46 interface; Figure 1) has a first length (portion of 46 from the top to the 46/chamber interface) and said flange section (top of 46 before the 46/chamber interface; Figure 1) has a second length, as claimed by claim 14
- xvi. The channel sleeve (46; Figure 1; column 4; lines 8-20) for a plasma processing chamber (Figure 1; column 4; lines 8-20) according to claim 14, wherein said first length (portion of 46 from the top to the 46/chamber interface) is greater than a length of said aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20), as claimed by claim 15
- xvii. The channel sleeve (46; Figure 1; column 4; lines 8-20) for a plasma processing chamber (Figure 1; column 4; lines 8-20) according to claim 1 wherein an outer surface (vertical surface) of said channel sleeve (46; Figure 1; column 4; lines 8-20) for a plasma processing chamber (Figure 1; column 4; lines 8-20) forms an angle ("L" portion of 46) with reference to the bottom (horizontal surface) of said channel sleeve (46; Figure 1;

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column 4; lines 8-20) for a plasma processing chamber (Figure 1; column 4; lines 8-20), as claimed by claim 16

- xviii. The channel sleeve (46; Figure 1; column 4; lines 8-20) for a plasma processing chamber (Figure 1; column 4; lines 8-20) according to claim 16, wherein said angle ("L" portion of 46) is non-orthogonal, as claimed by claim 17
- xix. The channel sleeve (46; Figure 1; column 4; lines 8-20) for a plasma processing chamber (Figure 1; column 4; lines 8-20) according to claim 1, wherein the electrically insulative material ("SiC"; Figure 1; column 4; lines 8-20) is selected from the group consisting of ceramics, multi-crystal ceramics, polyvinyl polymers, polytetrafluoroethylene, polyethylene, polypropylene, polyimides, polycarbonates and single crystal insulative minerals, as claimed by claim 20

Usami does not teach:

- i. wherein said inner opening (accommodating electrode 42; Figure 1; column 4; lines 8-20) transfers a spectroscopic endpoint detection signal – claim 1, 5, 6, 8
- ii. A method of processing a workpiece (228; Figure 2B; 48; Figure 2), comprising the following steps: (A) exposing the workpiece (228; Figure 2B; 48; Figure 2) to a plasma in the plasma processing chamber (Figure 1; column 4; lines 8-20) of Claim 2 and (B) transmitting the spectroscopic endpoint detection signal through the channel sleeve (46; Figure 1; column 4; lines 8-20) for a plasma processing chamber (Figure 1; column 4; lines 8-20) out from the plasma processing chamber (Figure 1; column 4; lines 8-20), as claimed by claim 4 – The Examiner believes that the directionality (into or out of Usami's chamber) of Usami's signal is a claim requirement of intended use. The

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Examiner believes Usami's apparatus is inherently capable of performing the intended use. It is well established that apparatus claims must be structurally distinguished from the prior art (*In re Danley*, 120 USPQ 528, 531 (CCPA 1959). — When the structure recited in the references is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent. MPEP 2112.01

- iii. transmitting a signal through the one-piece sleeve (46; Figure 1; column 4; lines 8-20) out from the chamber (Figure 1; column 4; lines 8-20) – claim 8. See above argument for claim 4, 8
- iv. The channel sleeve (46; Figure 1; column 4; lines 8-20) for a plasma processing chamber (Figure 1; column 4; lines 8-20) according to claim 12 wherein said channel sleeve (46; Figure 1; column 4; lines 8-20) for a plasma processing chamber (Figure 1; column 4; lines 8-20) applies a predetermined amount of pressure against an inner wall (chamber wall, not labelled; Figure 1; column 4; lines 8-20) of said aperture (hole in chamber wall, not labelled; Figure 1; column 4; lines 8-20), as claimed by claim 13

Ishikawa teaches a similar channel sleeve for a plasma processing chamber (302; Figure 5) used to deliver process gas to a treatment chamber (column 9, lines 45-64). Specifically, Ishikawa teaches a one-piece sleeve (outer surface of 302) with a flange section (302/314 interface) configured to remain outside the aperture.

Usami and Ishikawa do not teach a physical signal from the channel sleeve for a plasma processing chamber (Figure 1; column 4; lines 8-20) of claim 1 consisting of a spectroscopic endpoint detection signal or a channel therefore.

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Bernard J. Curtis teaches a spectroscopic endpoint detection signal and a channel therefore (34,36,32; Figure 3; column 2, lines 59-68).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the dimensions of the flange section (top of 46 before the 46/chamber interface; Figure 1), the lower section, and the bottom planar angle ("L" portion of 46) of Usami's one-piece sleeve, further, to replace Usami and Ishikawa's RF physical signal as discussed above with Bernard J. Curtis's spectroscopic endpoint detection signal.

Motivation to optimize the dimensions of the flange section (top of 46 before the 46/chamber interface; Figure 1), the lower section, and the bottom planar angle ("L" portion of 46) of Usami's one-piece sleeve is to enhance hermeticity of the process chamber as taught by Ishikawa (column 10, lines 20-28). Further, it is well established that changes in apparatus dimensions are within the level of ordinary skill in the art. (Gardner v. TEC Systems, Inc. , 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied , 469 U.S. 830, 225 USPQ 232 (1984); In re Rose , 220 F.2d 459, 105 USPQ 237 (CCPA 1955); In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); See MPEP 2144.04).

Motivation to replace Usami and Ishikawa's RF physical signal as discussed above with Bernard J. Curtis's spectroscopic endpoint detection signal is for determining the end point of the plasma etching process as discussed by Bernard J. Curtis (column 1, line 67 - column 2, line 5).

Response to Arguments

4. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new grounds of rejection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Rudy Zervigon whose telephone number is (571) 272-1442. The examiner can normally be reached on a Monday through Thursday schedule from 8am through 7pm. The official fax phone number for the 1763 art unit is (571) 273-8300. Any Inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Chemical and Materials Engineering art unit receptionist at (571) 272-1700. If the examiner can not be reached please contact the examiner's supervisor, Parviz Hassanzadeh, at (571) 272-1435.

Rudy Zervigon
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